

Date: October 16, 2012
To: Thomas J. Bonfield, City Manager
Through: Keith Chadwell, Deputy City Manager
From: Donald F. Greeley, Director, Water Management
Jerry F. Morrone, Utility Engineering Supervisor
Subject: Ellerbe Creek Aerial Sewer Crossing Replacement Project – Recommendation of Award to Crowder Construction Company, Inc.

Executive Summary

On September 27, 2012, bids were opened for the Ellerbe Creek Aerial Sewer Crossing Replacement Project. The project consists replacing the aerial support structure for approximately 800 linear feet of two 30" gravity sewer lines over Ellerbe Creek. The project site is located approximately 500' south of the intersection of Club Boulevard and Ellerbe Creek near the North Durham Water Reclamation Facility (NDWRF). The two 30" gravity sewer lines represent the majority of the incoming sewer flow to one side of the NDWRF plant. The sewer lines are currently an aerial stream crossing supported by a beam and pier structure that has been eroded by Ellerbe Creek. The proposed project will replace the existing support structure with a stronger and more durable structure, and rehabilitate the existing sewer lines to prevent future deterioration. The Department recommends that the City of Durham award this project to Crowder Construction Company, Inc, of Gainesville, Georgia in the amount of their bid of \$1,204,000.00. The Department is also recommending a contingency fund (~10%) be established for the construction.

Recommendations

The Department of Water Management recommends that the City Council:

1. Authorize the City Manager to execute a contract with Crowder Construction Company, Inc, for the Ellerbe Creek Aerial Sewer Crossing Replacement Project for the amount of \$1,204,000.00; and
2. Establish a contingency fund for the contract in the amount of \$116,000.00; and
3. Authorize the City Manager to negotiate change orders to the contract provided that the cost of all change orders does not exceed \$116,000.00 and the total project cost does not exceed \$1,320,000.00.

Background

The City of Durham Department of Water Management owns and operates a gravity sewer collection system that feeds NDWRF. Several of these gravity sewer lines combine in to two 30" gravity sewer lines that run parallel to Club Boulevard and enter NDWRF on the west side. The two 30" gravity sewer lines cross Ellerbe Creek in route to NDWRF by an 80 foot long aerial crossing, and are supported on piers and steel beams.

Ellerbe Creek, which experiences a significant increase in flow during major storms, and often contains large debris, has substantially eroded the foundation at the base of the support piers, and is

undermining the support for the gravity sewer lines. As a result of this erosion, an interim repair was made and a replacement is recommended. The interim repair consists of pumping concrete under one of the existing support piers to re-establish contact between the pier and the stream bed and pumping a limited amount of concrete on to the existing stream banks to prevent erosion around the support pier. Because the interim repair is not considered a long-term solution, it will be removed after completing of the proposed project. The design of the replacement proceeded concurrently with the interim repair.

The proposed project, considered a permanent solution, will remove the existing pier and beam structure and replace it with an aerial truss anchored on both sides of Ellerbe Creek. The anchor point locations are outside of areas likely to be eroded by Ellerbe Creek, and the truss system is designed to withstand significant lateral forces caused by flood water and the impact of large debris generated by Ellerbe Creek during major storm events. The gravity sewer lines will also be lined on the inside with a protective liner to protect the pipe from sewer gas damage. Additional manholes will be also be installed on the gravity sewer lines to facilitate this project and provide better access to the sewer lines for inspection and/or cleaning.

Issues and Analysis

Below is a summary of the three bids received. The Department and its consultant analyzed the bid information submitted and all bidders were deemed responsive.

Crowder Construction Company, Inc	\$1,204,000.00
Dellinger, Inc.	\$1,752,000.00
T.A. Loving	\$2,140,000.00

These bids were received after a re-advertisement of the contract due to an insufficient number of bids to open at the initial advertisement. The Department and its consultant performed a due diligence investigation on the three lowest bidders to determine the most responsible and responsive bidder. Based on this investigation, the Department recommends Award to Crowder Construction Company, Inc.

Alternatives

City staff is prohibited from performing construction work of this magnitude per state statute. Failure to complete the recommended repair will likely result in the failure of a major sanitary sewer line. Such a failure would result in a large magnitude sewer spill that would have significant environmental and regulatory ramifications. No feasible alternative has been identified for this project.

Financial Impacts

Funds for this project are available in the Capital Improvements Program, Sewer Collection System Rehabilitation, in the following accounts:

4100P767 731000 P280L	\$1,204,000.00
4100P767 731900 P280L	\$116,000.00

SDBE Summary

The Equal Opportunity/Equity Assurance Department reviewed the bid submitted by Crowder Construction Company, Inc. Gainesville, GA to determine compliance with the Ordinance to Promote

Equal Business Opportunities in City Contracting. The goals for this project are MSDBE 13% and WSDBE 3%. **SDBE REQUIREMENTS**

The Equal Opportunity/Equity Assurance Department reviewed the bid submitted by Crowder Construction Company, Apex, North Carolina to determine compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting. The goals for this project are MSDBE 13% and WSDBE 3%. It was determined that Crowder Construction Company was in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

SDBE REQUIREMENTS

Crowder Construction Company will subcontract to the following certified firm:

Firm	ID	City/State	Amount	% of Contract
Abram Construction Inc.*	MBE	Charlotte, NC	\$157,000	13%
Carolina Management Team, LLC**	WBE	Enka, NC	\$21,568	2%
Mayo Transport Inc.**	WBE	Roxboro, NC	\$15,000	1%
CES Group Engineers, LLP**	WBE	Denver, NC	\$2,250	.2%

*Abram Construction Inc. is a certified DBE and MBE firm with the North Carolina Department of Transportation and can therefore be used to meet the minority goal for this project.

**Carolina Management Team, LLC, Mayo Transport Inc. and CES Group Engineers, LLP are certified as DBE and WBE firms with the North Carolina Department of Transportation and can therefore be used to meet the women goal for this project.

The MSDBE goal and the WSDBE goal were both met.

WORKFORCE STATISTICS

The workforce statistics for Crowder Construction Company are as follows:

Total Workforce	653	
Total Females	67	10%
Total Males	586	90%
Black Males	33	5%
White Males	487	75%
Other Males	66	10%
Black Females	9	1%
White Females	53	8%
Other Females	10	1%